

REMARKS

Reconsideration is respectfully requested in light of the foregoing Amendment and remarks that follow.

Claims 1-11 are before the Examiner. Claim 4 has been amended to specify a threshold salt concentration. The limitation "more than 5 %" is supported by a passage beginning at line 4 on page 3, Examples 2 5, 6 and 7 and Table 1. Claim 11 has been added to cover an embodiment disclosed but not previously claimed. Support for the step is to be found on page 4 at line 2.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over CA 2,223,377 taken in view of Vanell (6,423,638). Applicants respectfully traverse.

Claims 1-3, 5 and 8 are directed to a narrow distribution of pyrogenically produced potassium-doped metal or metalloid oxide particles, having a BET surface between 1 and 1000 m²/g, wherein the distribution is at least 7. A value of one reflects particles having a single uniform particle size. The doping possessed by the particles is defined in terms of the preparatory process and conditions. Claim 8 defines the potassium threshold concentration that results in the morphological changes necessary for the narrow range. Claim 2 defines a range of pH characteristics and claim 3 defines a doping amount range of 1 to 20,000 ppm and dibutylphthalate absorption in terms of non-recognition of its end point.¹ The remaining rejected claims are directed to a two-step process for directly preparing pyrogenic metal or metalloid oxide particle composition having a narrow particle. New claim 11 specifies a third step.

¹ The fumed metal oxide according to the art (i.e. example 1) shows a DBP-value because it has a structure and therefore the viscosity increases when the fumed oxide is given into water. This means that highly filled dispersion cannot be made with the fumed silica according to the art. It has the advantage that no structure can be estimated by the DBP-method. This means that highly filled dispersion can be produced, because the viscosity remains low.

CA 2,223,377 (Mangold) does not teach the claimed particle characteristics. There is no recognition of the claimed distribution range. There is no explanation in the Office Action as to why it would be reasonable to expect that a particle composition having the claimed range is taught. This is also true of the other recited characteristics set forth in the dependant claims.

The '377 document is equivalent to DE 196 50 500, which is cited on page 1, paragraph 2 of the instant specification. The difference between the cited art according to DE 196 50 500 is disclosed on page 1 and page 2 of the specification, where it is said that the narrow breadth of the distribution of the particle size (at least 0.7) is responsible for the effect that no scratches are caused by large particles during the chemical-mechanical polishing.

The secondary reference, Vanell (US 6,423,638), does remedy the deficiencies of the primary reference as to the product characteristics. Varnell does not explain why the particle composition of the primary reference would be reasonably expected to have the characteristics of the product defined in claim 1 as well as those defined in the dependent claims.

Vanell merely discloses the filtering of a colloidal silica suspension. Colloidal silica is not pyrogenic silica. Vanell does mention silicon dioxide in column 15, line 45-59 merely as a point of comparison or to describe the desired particle size of the primary particle of sodium silicate. Fumed, pyrogenic silica is not mentioned in the Vanell patent as a source material for its process.

It appears that the Examiner is of the opinion that it would be obvious to modify the process described in the '377 document to include the filtration step taught by Vanell and thereby inherently achieve the product, without knowing it. It is not clear why the mere filtration of the products of the Canadian Patent using the Vanell methodology would result in the claimed product. Further, it is not clear that one of ordinary skill in this art would combine the primary reference with Vanell. Vanell is concerned with colloidal silica. The

primary reference is not. It is concerned with pyrogenic silica. These materials are different. Colloidal silica is formed from sodium silicate directly in solution. Pyrogenic silica is not. Please consider U.S. Patent No. 6,676,719 where differences between the two are discussed in the background section. The discussed differences include dispersibility and purity. Colloidal silica has impurities and is readily dispersible while pyrogenic is not readily dispersible but is pure.

Further, the filter method according to Vanell does not produce a fumed silica with a small particle size distribution. The filter only separates smaller particles from larger particles. This is not a method which narrows particle size distribution range having both large and small particles. Vanell merely achieves a separation of smaller particles from larger ones relative to the threshold value of filter.

Also, Applicants are of the opinion that there is no known method, which allows one to screen a fumed metal oxide. The Examiner has provided no reference providing such a teaching.

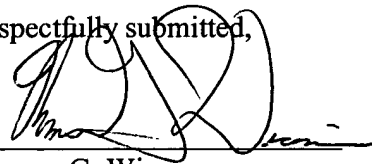
In addition, claim 4 as amended specifies a concentration threshold not taught by the primary reference. Further, new claim 11, not only requires the concentration threshold of claim 4, but specifies a step not taught or suggested by the reference.

Accordingly, withdrawal of the rejection is respectfully requested since a prima facie case has not been established. As to the product claims, the teachings of the references, taken alone or in combination, fail to teach or suggest the claim product characteristics. As to the method claims, it is not clear as to why the references would be combined. The materials involved are chemically distinct. Further, even if the references were deemed combinable, the combined teaching are insufficient to teach the invention as now claimed .

In view of the foregoing amendments and remarks, the application is believed to be in condition for allowance and a notice to that effect is respectfully requested.

Should the Examiner not find the Application to be in allowable condition or believe that a conference would be of value in expediting the prosecution of the Application, Applicants request that the Examiner telephone undersigned to discuss the case and afford Applicants an opportunity to submit any Supplemental Amendment that might advance prosecution and place the Application in allowable condition.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Thomas G. Wiseman', written over a horizontal line.

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